

SCIENCE and INVENTION

ENLARGE PICTURES BY HAND
Apparatus Invented by a German
Does Work With Almost Same
Accuracy as Photograph.

An apparatus by means of which pictures can be enlarged by hand with almost as much accuracy as a photograph can be mechanically enlarged has been invented by a German. A lamp has a series of reflecting mirrors blinged at the top and a lens set in a tubing that points downward over the artist's drawing paper. A picture, suppose it is a portrait, is placed



For Enlarging Pictures.

on top of the apparatus and its reflected image, passing through the magnifying glass, appears on the paper several times enlarged, but naturally a perfect replica of the original. An artist of only small ability can then trace over the lines and make a faultless copy of the head. Such an apparatus should be of great value to those who make a specialty of large crayon portraits done from photographs, a trade seldom pilled outside of rural districts.

NEW TYPES OF AIR SICKNESS

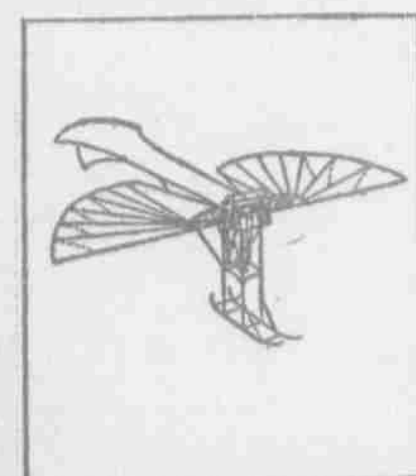
Most Remarkable Symptom Is Overpowering Sleepiness, With Sluggish and Clumsy Movements.

Climbing into the air has developed three new types of disease: (1) mountain sickness, due to the muscular work of climbing in addition to the rarefaction of the air; (2) balloon sickness, produced only at great heights by the thinness of the air, and (3) aviators' sickness, in which more severe symptoms result from the rapidity of the change of atmospheric pressure, especially in descent. Berger notes that aeroplanes may rise to 10,000 feet in an hour. The humming or cracking produced in the ears is the same as in balloon disease, but there is also a peculiar uneasiness, and the aviator is quickly out of breath. The French aeronaut mentions further that the descent in a sailing flight may be at the rate of 1,000 feet or more a minute. Morane at Havre having dropped 8,000 feet in six minutes. The effects are heart beats of great force but no increase in rate, humming in the ears, and an exaggerated special uneasiness. There is burning of the face, with severe headache. But the most remarkable symptom is the overpowering sleepiness, with sluggish and clumsy body movements, and this may last for days.

FLYING MACHINE LOOKS ODD

Resembles Hugu Bird-Kite, With Two Wings and Long Tail—Invention of an Ohio Man.

One of the oddest looking flying machines yet has been devised by an Ohio man, who evidently belongs to that class of aerial inventors who stick to the theory that to fly you must have wings. This machine, as the cut shows, resembles a huge bird kite, with its two wings and long tail. The wings are pivoted to the body of the machine and are driven up and down by shafts operated by the engine.



Odd Flying Machine.

gine, which sets in the framework of the body. The tail, of course, is to preserve a balance. The wings are provided with individual rotatable vanes that open as they go up, thus offering practically no resistance to the air, and close as the wings come down, thus forming the flat surface required to support the machine. The pair of sledgeline runners at the bottom act as feet and enable the aviator to alight safely on the ground.

FEW ABUSES OF AUTOMOBILE

Tax on the Eyes and Nervous System Imposed by High Speed—Also Numerous Minor Ills.

The twentieth century may fairly be called the age of speed. The trolley car, rushing through city streets and country roads, replaces the jogging horse car and rumbling stage; the fast steamers take you to England in five days; the thousand miles between New York and Chicago is covered in 18 hours; and mankind has almost forgotten the joys of a quiet saunter. Distances have been shortened by the bicycle, the automobile and the motor boat, and the aeroplane is to outspeed them all.

Although much is gained, perhaps, the physician knows that something is lost, remarks the Youth's Companion. The uses and benefits of the automobile, for example, are great if it is sensibly used; but when it is abused the danger to those in and out of the car is even greater. Driving a high power car at full speed is a pleasurable form of intoxication, but like all intoxications it has its penalties, and they are heavy.

The driver's eyes and nervous system may suffer seriously, although there are numerous minor ill to which he is liable that may come first and teach him moderation.

The tax on the eyes is enormous, for they are kept at constant strain looking for obstacles and inequalities in the road. The wind and dust in spite of goggles often cause a troublesome inflammation that yields only to rest in a darkened room and appropriate medical treatment.

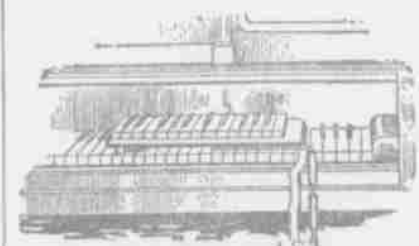
A not uncommon affection of the eyes is a failure to focus properly, the ciliary muscles become exhausted and suddenly cease to act—a temporary paralysis that causes a sudden blurring of the vision. If that comes while the car is going at full speed the driver is fortunate if he can stop it in time. The only course for the driver who has had this affection is to give up the wheel, for if it has occurred once it may occur again at any time.

Another ailment that may affect the passengers as well as the driver is a painful stiff neck caused by unconscious muscular tension. But the most serious penalty that follows abuse of the automobile is neurasthenia or nervous breakdown. A man whose brain is fatigued with business cares cannot with safety substitute another form of mental strain for the needed relaxation.

MUSICAL BELLS FOR PIANOS

Attachment Designed Particularly for Moving Picture Theaters and Similar Places.

The piano attachment for musical electric bells, designed practically for motion-picture theaters and similar places where only a pianist is employed, is just being marketed by a Wisconsin manufacturer, says the Popular



Musical-Bell Attachment.

Mechanics. A small keyboard swings into position as shown in the drawing, and by means of it the pianist can operate the musical bells, playing loudly or softly as desired.

NOTES OF SCIENCE AND INVENTION

There are six thousand known languages and dialects.

Screen doors with fly traps attached are a recent invention.

The greatest depth of the sea yet discovered is 32,085 feet.

The precise weight of an English ounce was fixed by Henry III.

Foreigners living in Siam will establish a Pasteur treatment hospital at Bangkok.

A mitten has been patented that adds to the surface of the hand and aids a swimmer.

Fresh milk may be used as "invisible ink." To make it visible scatter coal dust on the writing.

Two new British battleships will be fitted with anti-rolling tanks, the first war craft so equipped.

The list of known insects is increased annually by the addition of about eight thousand specimens.

French astronomers blamed a large sun spot for the coldest August experienced in that country in years.

The pulse of the new born infant beats at the rate of 136 per minute and at the age of thirty, it is half that rate.

A camera which will enable motion pictures of the aurora borealis to be made has been perfected by a Swedish scientist.

Two separate pianos within a single case, the keyboards being at right angles to each other, is a musical instrument novelty.

The recent striking of an Italian army balloon by lightning was the first happening of the kind known to scientists.

An Arizona scientist has discovered that dates can be ripened in an incubator to a perfection that rivals the fruit brought direct to Florida from Africa.

LEADERS OF THE ARMY OF BULGARIA



OUR illustration is from a photograph of the Bulgarian generals at the army maneuvers. Ferdinand, czar of Bulgaria, is seen at the right, indicated by a cross.

TO EXPLORE AMAZON

Scientists Charter Yacht to Visit South America.

Characteristics of Country and Habits of Tribes That Live There to Be Studied for Months by Members of Expedition.

Philadelphia.—Aboard the Mermaid, a 120-foot steam yacht, the members of the University of Pennsylvania South American expedition left here for the Amazon. The yacht will voyage by way of Porto Rico, Barbados and Trinidad to Para, at the mouth of the Amazon, and will then steam up the great river into one of its upper tributaries, proceeding up the uncharted stream until the shallows check her. She will then be moored and serve as headquarters for the exploring parties, which will use the gasoline launch and canoes with which she is equipped in order to reach those points on the river which are not navigable by the yacht herself. When the observations shall have been completed in any given locality the collections will be assembled on the yacht, which will then pass on to the next tributary to be explored. Para or Manaus will serve as a base of supplies, according to the region of the Amazon basin to which the expedition directs its attention for the time being.

The main purpose of the expedition is to study the Indian tribes of the Amazon valley, which have not been studied in detail, and to collect for the university museum specimens of their arts, industries, customs and modes of life. Their songs will be recorded on the phonograph, and their dances and various activities will be reproduced by the moving-picture camera. Systematic studies will be made of the native languages, religious and social systems and decorative art. In brief, the expedition seeks to furnish a complete record as modern methods can afford of the native life of the Amazon valley and to illustrate these studies by adequate collections assembled in the university museum.

The remoteness and seclusion of many of the tribes which will be studied is indicated by the fact that such a condition as that reported on the Putumayo river can exist in the face of modern civilization and without interference from any local government.

While the study of native life forms the main object of the expedition, other aspects of exploration will not be neglected. A medical investigator will accompany the party for the purpose of studying beri-beri and other fatal diseases peculiar to the Amazon region, and the flora and fauna of the country will receive due attention.

The man selected by the museum to have charge of the expedition is Algot Lange, whose experiences in the jungles of the Amazon two years ago, when accompanying a party of rubber hunters, nearly cost him his life. With Lange will be associated an ethnologist, a naturalist, a physician and a moving-picture photographer. The physician chosen for the post is Dr. Franklin Church of New York.

No danger is anticipated from the natives, who are peaceably inclined and hospitable to strangers. In dealing with these tribes many simple gifts will be made in exchange for feather work, bows and arrows and blowguns, drums and musical instruments, decorated calabashes and pottery.

BABY TO BE PERFECT WOMAN

To Be Only One in World When She Grows Up, Declares Her Father, Athletic Director.

Minneapolis, Minn.—To become the world's most perfect woman, physically, is the future mapped out for Margaret Terry Hudson Grant, two years two months old, by her father, Richard Grant, director of track athletics of the University of Minnesota, and ever since she was three weeks old, the baby has been training for the place she is some day to fill.

Systematic exercise, under the careful supervision of her father, who himself was formerly a track star at Yale, and who has "made" many Minnesota athletes, is as much a part of little Margaret's daily life as the food she eats. Mr. Grant explained the other day while the baby went through her regular course.

She weighs 28 pounds, without an ounce of fat on her little body.

She can walk up three flights of stairs and back without stopping.

The little girl, though beginning to talk, delights in her daily physical exercise. The more common of these includes:

A wand drill to strengthen and develop her chest muscles.

"She is going to be perfect physically when she grows up," confidently asserted Mr. Grant, "and probably that's something that can be said of no woman in the world at this time."

TRAPPED, TRIES TO CUT FOOT

Man Imprisoned on Track Before Train Attempts to Use Knife on Captured Limb.

Chicago.—Caught on a railroad track like a fox in a trap, with a passenger train due in a short time, Joseph Kowanski, 51 years old, did what the animal would have done. He attempted to sever his foot.

Kowanski, a watchman in the Chicago & Eastern Illinois railroad yards at South Leavitt and West 43rd streets, was making his rounds at 8 o'clock in the morning when his left foot was caught in a frog.

Knowing a fast train was due in half an hour, Kowanski twisted and wrenched at the imprisoned leg, but in vain. The terrific strain broke the leg in two places. Almost unconscious from pain, Kowanski then attempted to cut off his foot with a knife.

Just as he was starting on the operation Alexander Gata, a fellow workman, happened along. He opened the switch and released Kowanski. The train passed the "trap" three minutes after Kowanski had been rescued.

GOAT VANQUISHES POLICE

Ruminant Butts Man Off Porch and Strips of His Uniform Officer Sent to Quiet Him.

Chicago.—John Boland of 1700 West Twenty-second street was a thousand miles from Chicago in his dreams, sleeping on a chair on the back porch, when a large Angora goat, with a snowy beard and a determined expression, butted him off the chair and into wakefulness.

Boland ran a marathon to the wood shed just in time to feel the impact of the goat against the door. Members of the family, aroused by his appeals for aid, telephoned the police and Charles Tickney, a brave patrolman, responded.

Tickney learned with ease to distinguish between both ends of a healthy goat. As he groped about in the dark yard something went amiss. He believes that he collided with the goat. At any rate, he sustained a terrific shock where the high cost of living is most felt.

Neighbors notified the police again, this time that a riot was in progress. They also suspected a Mexican invasion and a decisive battle in the Boland back yard. Policemen who crowded a responsive patrol wagon deduced the fact that the goat had disappeared, as they failed to sustain the shocks that almost sent Tickney to the hospital.

Boland, who has forewarned the chair on the porch for sleeping purposes, told the police he did not know what kind of an animal he had to deal with. He almost suspected that a white elephant was loose.

FINDS BIG BUNCH OF LOOT

Search for a Dollar Whip Discloses Stolen Property Worth \$2,000.

York, Pa.—In trying to locate a dollar whip, which had been stolen from the buggy of Michael Dougherty of Chancetford, Detective Charles White unearthed at the home of Adam S. Keesey of Spry, about two miles from this city, stolen property to the amount of \$2,000, which had been carried away from the Pullman Automobile works. The plunder consisted of all parts of the machines.

Keesey broke down and confessed his guilt and said he had been selling the loot for junk. In default of bail he was sent to jail. The accused man has a wife and five children.

OFFER PRIZES FOR CHILDREN

Citizens of Douglaston, L. I., in Quaker Predicament Over School Money.

New York.—Having failed to find more than fifteen children in Douglaston, Long Island, one of the outlying villages included within the limit of Greater New York, of the proper age to attend a kindergarten, the citizens of the place will offer prizes to any one who will furnish three more children to attend the school, that the salary of the teachers may be paid by the board of education of New York. A state law provides that a city kindergarten must have at least eighteen children.

FOLEY KIDNEY PILLS

Are Highest in Curative Qualities FOR BACKACHE, RHEUMATISM, KIDNEYS AND BLADDER

Price—Fifty Cents. A Box of 100 Pills for a Course averages \$1.00. A Small Bottle 50 Cents. 12 Bottles \$10.00. Write for Free Book, H. J. Foley, Boston, Mass.

RARE OPPORTUNITY FOR INVENTORS—With a nominal amount you can join us to develop a most profitable GOLD MINING investment. Address Box 385, Green Valley, Calif.

Dull. "Was your aviation meet a success?" "No, not much of a one. There were only three accidents and no fatalities."

Important to Mothers. Examine carefully every bottle of CASTORIA, a safe and sure remedy for infants and children, and see that it bears the Signature of *Dr. J. C. Foley*. In Use For Over 30 Years. Children Cry for Fletcher's Castoria.

The Only Way. "No use to woo that girl. She has a heart of marble." "Then leave it in statu quo."

Comparative Luxury. "My father has a horse and buggy." "Yes, but my brother was run over by an automobile."

Will Soon Wake Up. Cincinnati woman declares she has discovered a man without a fault. Wait till they've been married ten years.—Milwaukee Sentinel.

At a Distance. "She certainly tries to obey her mother's injunction not to let the young men get too near." "Why, I saw a young man with his arm around her last night." "I know, but she had a faraway look in her eyes."

Jackson's Relief. Wilson (who has met his friend whom he hasn't seen for some time)—Let me see, you knew poor old Jackson, didn't you?

Johnson—Yes, I knew him well. Wilson—Then you will be pleased to hear he is out of his misery at last. Johnson—You don't say so. Poor old fellow; but I always thought he would pop off suddenly. When did he die?

Wilson—Oh, he's not dead; it's his wife.

Height of Assurance. A man was charged with stealing a horse, and after a long trial the jury acquitted him. Later in the day the man came back and asked the judge for a warrant against the lawyer who had so successfully defended him.

"What's the charge?" inquired the judge.

"Why, your honor," replied the man, "you see, I didn't have the money to pay him his fee, so he took the horse I stole."—Lippincott's Magazine.

Open Air Schools Grow in Favor. With the opening of the fall school term, over 200 open air schools and fresh air classes for tuberculous and anemic children, and also for all children in certain rooms and grades, will be in operation in various parts of the United States, according to the National Association for the Study and Prevention of Tuberculosis. All of these schools have been established since January, 1907, when the first institution of this character was opened in Providence, R. I. On January 1st, 1910, there were only 13 open air schools in this country and a year later the number had increased only to 29. Thus, the real growth in this movement has been within the last two years. Massachusetts now leads the states with 86 fresh air schools and classes for tuberculous, anemic and other school children. Boston alone having over 80. New York comes next with 28, and Ohio is third with 21. Open air schools have now been established in nearly 50 cities in 19 different states.

A Million Persons Breakfast every morning on

Post Toasties

Suppose you try the food with cream and sugar, as part of breakfast or supper.

You may be sure it will be a delicious part.

"The Memory Lingers"

Postum Cereal Company, Ltd. Battle Creek, Mich.